

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Sub 4

1. (Original) A computer program product for a system including a processor comprises:

a tangible memory coupled to the processor including:

code that directs the processor to determine an output resolution for an output stream of data;

code that directs the processor to determine an output frame rate for the output stream of data;

code that directs the processor to determine an output color depth for the output stream of data;

code that directs the processor to retrieve a first frame of data, a second frame of data, and a third frame of data from an input stream of data, the input stream of data having an input resolution, an input frame rate, and an input color depth;

code that directs the processor to subsample the first frame of data, the second frame of data, and the third frame of data to respectively form a first subsampled frame of data, a second subsampled frame of data, and a third subsampled frame of data, when the output resolution is lower than the input resolution;

code that directs the processor to remove the second subsampled frame of data, when the output frame rate is lower than the input frame rate;

code that directs the processor to reduce color depth for the first subsampled frame of data and the second subsampled frame of data to respectively form a first reduced frame of data and a second reduced frame of data, when the output color depth is smaller than the input color depth; and

code that directs the processor to convert the first reduced frame of data and the second reduced frame of data into the output stream of data.

2. (Original) The computer program product of claim 1 wherein the tangible memory further comprises:

code that directs the processor to determine an output bit rate for the output stream of data; and

code that directs the processor to scale the first reduced frame of data and the second reduced frame of data, in response to the output bit rate for the output stream of data

3. (Original) The computer program product of claim 1 wherein the output stream of data is in a format selected from the group consisting: MPEG-1, MPEG-2, MPEG-4, jpeg, gif, wbmp.

4. (Original) The computer program product of claim 1 wherein the output stream of data is in a format selected from the group consisting: *.avi, *.rm, *.mov.

5. (Original) The computer program product of claim 1 wherein the output resolution is a multiple of a frame having a resolution of approximately 80 horizontal pixels by approximately 60 vertical pixels.

6. (Original) The computer program product of claim 1 wherein the output resolution is a multiple of 8 horizontal pixels.

7. (Original) The computer program product of claim 1 wherein the tangible memory further comprises:

code that directs the processor to crop the first frame of data, the second frame of data, and the third frame of data before subsampling.

8. (Original) A program product for a processor comprises:
code that directs the processor to receive a specification of a resolution, a frame rate, a color depth, and format for the output video stream;

code that directs the processor to receive a specification of a resolution, a frame rate, and a color depth, for the input video stream;

code that directs the processor to receive a plurality of video frames from an input video stream;

code that directs the processor to subsampling each video frame from the plurality of video frames, when the resolution for the output video stream is different from the resolution of the input video stream;

code that directs the processor to drop video frames from the plurality of video frames, when the frame rate for the output video stream is different from the frame rate of the input video stream;

code that directs the processor to reduce color depth for video frames from the plurality of video frames, when the color depth for the output video stream is different from the color depth of the input video stream; and

code that directs the processor to convert the plurality of video frames to the output video stream in response to the format for the output video stream;

wherein the codes reside on a tangible media.

9. (Original) The program product of claim 8 further comprising

code that directs the processor to receive a specification of a bit rate for the output video stream; and

code that directs the processor to determine scaling factors for the plurality of video frames; and

code that directs the processor to scale the plurality of video frames by the scaling factors.

10. (Original) The program product of claim 8 wherein the format for the output video stream comprises an MPEG standard.

11. (Original) The program product of claim 8 wherein the format for the output video stream comprises a streaming video format.

12. (Original) The program product of claim 8 wherein the resolution for the output video stream is a rational multiple of the resolution. for the input video stream.

13. (Original) The program product of claim 8 the code that directs the processor to reduce color depth for video frames from the plurality of video frames is executed before the code that directs the processor to subsample each video frame from the plurality of video frames.

14. (Original) The program product of claim 8 wherein the format for the input video stream comprises data from a file.

15. (Original) The program product of claim 9 wherein the bit rate for the output video stream is greater than or equal to approximately 38 kilobits per second.

16. (Original) A program product for a processor for dynamically reducing bandwidth of an input video stream to meet bandwidth requirements for an output video stream comprises:

code configured to direct the processor to receive frames of data derived from the input video stream;

code configured to direct the processor to receive bandwidth requirements for the output video stream, and an encoding format for the output video stream;

code configured to direct the processor to reduce bandwidth used by the frames of data in response to the bandwidth requirements; and

code configured to direct a processor to encode bandwidth reduced frames of data to form the output video stream in the encoding format;

wherein the codes reside on a tangible media.

17. (Original) The program product of claim 16
wherein bandwidth requirements comprise spatial bandwidth; and

wherein the code configured to direct the processor to reduce bandwidth used by the frames of data comprises code configured to direct the processor to reduce spatial bandwidth used by the frames of data in response to the spatial bandwidth requirements.

18. (Original) The program product of claim 17 wherein code configured to direct the processor to reducing spatial bandwidth comprises code configured to direct the processor to subsample the frames of data.

Q! 19. (Original) The program product of claim 16 wherein bandwidth requirements comprise color bandwidth; and wherein the code configured to direct the processor to reduce bandwidth used by the frames of data comprises code configured to direct the processor to reduce color bandwidth used by the frames of data in response to the color bandwidth requirements.

20. (Original) The program product of claim 19 wherein code configured to direct the processor to reducing color bandwidth comprises code configured to direct the processor to reduce a bit depth of the frames of data.

21. (Original) The program product of claim 16 wherein bandwidth requirements comprise frame rate; and wherein the code configured to direct the processor to reduce bandwidth used by the frames of data comprises code configured to direct the processor to reduce frame rate of the frames of data in response to the frame rate requirements.

22. (Original) The program product of claim 21 wherein code configured to direct the processor to reducing frame rate comprises code configured to direct the processor to eliminate frames from the frames of data.

23. (New) A method for dynamically reducing a bandwidth of an input video stream to meet bandwidth requirements for an output video stream comprises:

receiving frames of data derived from the input video stream;

receiving bandwidth requirements for the output video stream, and an encoding format for the output video stream;

reducing bandwidth used by the frames of data in response to the bandwidth requirements; and

encoding bandwidth reduced frames of data to form the output video stream.

24. (New) The method of claim 23 wherein bandwidth requirements comprise spatial bandwidth; and

wherein reducing bandwidth used by the frames of data comprises reducing spatial bandwidth used by the frames of data in response to the spatial bandwidth requirements.

25. (New) The method of claim 24 wherein reducing bandwidth comprises subsampling the frames of data.

26. (New) The method of claim 23 wherein bandwidth requirements comprise color bandwidth; and

wherein reducing bandwidth used by the frames of data comprises reducing color bandwidth used by the frames of data in response to the color bandwidth requirements.

27. (New) The method of claim 26 wherein reducing color comprises reducing a bit depth of the frames of data.

28. (New) The method of claim 23 wherein bandwidth requirements comprise frame rate; and

wherein reducing bandwidth used by the frames of data comprises reducing frame rate of the frames of data in response to the frame rate requirements.

29. (New) The method of ~~claim 27~~ wherein reducing frame rate comprises eliminating frames from the frames of data.
